



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,959	06/15/2006	Hitoshi Takamatsu	740165-428	1480

25570 7590 12/18/2008
ROBERTS MLOTKOWSKI SAFRAN & COLE, P.C.
Intellectual Property Department
P.O. Box 10064
MCLEAN, VA 22102-8064

EXAMINER

KRUER, STEFAN

ART UNIT	PAPER NUMBER
----------	--------------

3654

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

12/18/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

lgallaugh@rmsclaw.com
dbeltran@rmsclaw.com

Office Action Summary	Application No. 10/582,959	Applicant(s) TAKAMATSU ET AL.	
	Examiner Stefan Krueer	Art Unit 3654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 10 September 2008 have been fully considered and are found persuasive; consequently, the claims are herein rejected over newly and previously cited prior art of record.

Specification

Title

The title as recommended and filed under amendment is accepted.

Abstract

The amendment of the Abstract to correct for the misspelling of the term "lock" is acknowledged; however, Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words (Current word count is 190). It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said" and "comprised" should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 – 2, 5 – 6 and 8, are rejected under 35 U.S.C. 103(a) as being unpatentable over Grabinski et al (4,979,694) in view of Butenop et al (4,618,108) and in further view of Nagata et al (6,354,528).

Re: Claims 1 – 2, 5 – 6 and 8, Grabinski et al disclose a webbing retractor comprising:

- a retracting shaft (11) for retracting a webbing belt for restraining an occupant;
- a lock mechanism (14 – 16) which includes a lock gear (14) with ratchet teeth (15) being formed at an outer peripheral face of the lock gear and a lock plate (16) disposed to be able to be engaged with the ratchet teeth of the lock gear, and which is structured to be able to prevent rotation of the retracting shaft in a webbing pulling-out direction by the lock plate being engaged with the lock gear (Col. 4, L. 9 – 28);
- a pretensioner mechanism (10, 12) coupled to an end portion of the shaft, and which is structured to be able to forcibly rotate the retracting shaft in a webbing retracting direction; however,

Grabinski et al are silent with respect to a torsion bar and their pretensioner mechanism includes a sleeve.

Attention is directed to Butenop et al who teach their pretensioner (15, Fig. 1) having a sleeve (22) provided integrally at an axial center portion of their lock gear (24), wherein their lock gear has an annular outer periphery (Fig. 2) on which ratchet teeth

(26) are formed, for their inventive feature of eliminating a "... loss of self-locking action once a (pre)tensioning ... is triggered" (sic) (Abstract).

It would have been obvious to one of ordinary skill in the art to modify the reference of Grabinski et al with the teaching of Butenop et al to provide an integral arrangement of a pretensioner mechanism and lock gear for compactness and enabling subsequent locking of a seat belt retractor (e.g., normal operation) following a pretensioning of the seat belt for greater utility.

However, Butenop et al are silent with respect to a torsion bar and their sleeve having a knurled inner periphery.

Attention is directed to Nagata et al who teach their force limiter mechanism which includes a torsion bar (92, Fig. 11) having one end portion coupled to their retracting shaft (70), and which is structured to be able to absorb a rotating force of the retracting shaft in the webbing pulling-out direction when the rotation of the retracting shaft in the webbing pulling-out direction is prevented by their lock mechanism (82, 96, Fig. 21), and their torsion bar having a sleeve (78A, Fig. 11) of their pretensioner mechanism (14, 104) that is provided integrally at an axial center portion of their force limiter mechanism, for feature of a "...small pretensioner and lock device of reduced number of parts (sic)...", wherein their sleeve is formed in a cylindrical shape coaxial with their pretensioner and lock gear (82), and an inner peripheral face of the sleeve is knurled (to accommodate 92B) (Col. 19, L. 55 – 60 and Col. 30, L. 58 – 67).

It would have been obvious to one of ordinary skill in the art to modify the invention of Grabinski et al and Butenop et al with the teaching of Nagata et al for proper transfer of force and for savings in space and costs.

Claims 3 – 4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grabinski et al in view of Butenop et al and Nagata et al and in further view of Lee et al (6,513,747).

Re: Claims 3 and 7, Grabinski et al disclose a retracting shaft and pretensioner- and locking mechanisms; however, Grabinski et al are silent with respect to a torsion

Art Unit: 3654

bar and their pretensioner mechanism having a sleeve as well as their pretensioner mechanism having a rack.

Butenop et al teach their pretensioner mechanism having a sleeve integral in their lock gear for feature of compactness and enabling subsequent locking of their spool following a pretensioning.

It would have been obvious to one of ordinary skill in the art to modify the reference of Grabinski et al with the teaching of Butenop et al for compactness and greater utility.

However, Butenop et al are silent with respect to their pretensioner having a rack, their force limiter includes a torsion bar and their sleeve having an inner periphery comprising a knurled surface.

Nagata et al teach their pretensioner mechanism having rack (130, Fig. 14) which is provided on their piston (146, 132) that moves within their cylinder (136) by receiving gas pressure, as well as a pinion (104) which is disposed coaxially with their retracting shaft, a force limiter including a torsion bar and an inner peripheral face of their sleeve is knurled, in total comprising a pretensioning device as known in the art.

It would have been obvious to one of ordinary skill in the art to modify the invention of Grabinski et al and Butenop et al with the teaching of Nagata et al for utility.

However, Nagata et al are silent with respect to a clutch plate.

Attention is directed to Lee et al who teach their pretensioner mechanism comprising a piston (164) which moves within their cylinder (163) by receiving gas pressure and a clutch plate (side of 214, Fig. 4B) which transmits a rotating force of their pinion (210) to their sleeve (122, Fig. 3), for feature of isolating their pretensioner mechanism from their shaft when their shaft is in a webbing pulling-out direction.

It would have been obvious to one of ordinary skill in the art to modify the invention of Grabinski et al, Butenop et al and Nagata et al with the teaching of Lee et al for utility.

Re: Claim 4, Grabinski et al, Butenop et al and Nagata et al are silent with respect to a clutch plate.

Attention is directed to Lee et al who teach their clutch plate (side of 214, Fig. 4B) further comprising a cam (angled portions of 214) for feature of isolating their pretensioner mechanism from their shaft when their shaft is in a webbing pulling-out direction while affording force transmission in a webbing pulling-in direction.

It would have been obvious to one of ordinary skill in the art to modify the invention of Grabinski et al, Butenop et al and Nagata et al with the teaching of Lee et al for utility.

Response to Arguments

Applicant's arguments filed 10 September 2008 have been fully considered and are found persuasive; consequently, the claims are herein rejected over new and previously cited prior art of record.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ebner et al (5,788,176) and Rees et al (6,460,935) are cited to webbing retractors having pretensioner mechanisms coaxial with locking mechanisms, wherein the pretensioner mechanism of Ebner et al has a sleeve (22) coaxial of their lock gear, a force limiter having a torsion bar (30) and an inner mechanism of their lock gear having a knurled surface to accommodate their torsion bar whereas the pretensioner mechanism (16, having pulley 10) of Rees et al is coaxial of their lock gear (14) with which it forms a compact arrangement through mounting on a common sleeve (17) and said arrangement is complemented by a spring clutch (19, 18) and rack (21).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stefan Kruer whose telephone number is 571.272.5913. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Cuomo can be reached on 571.272.6856. The fax phone number for the organization where this application or proceeding is assigned is 571.273.8300.

Art Unit: 3654

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866.217.9197 (toll-free).

/Stefan Kruer/

Examiner, Art Unit 3654

14 December 2008

/Peter M. Cuomo/

Supervisory Patent Examiner, Art Unit 3654